SCIENTIFIC ABSTRACT

Treatment of Spontaneous Tumor Metastases with IL-12 DNA: A Phase IB Trial

The objective of this Phase I study is to assess the safety and toxicity of treatment to metastatic tumor underlying the skin with the DNA encoding IL-12. The IL-12 DNA will be delivered to the tumor by injection of "naked" DNA. This method of gene therapy was chosen based on preliminary murine data generated by our group which demonstrated regression of intradermal murine tumors after transfection of the tumor cells with IL-12.

In this study, patients with cutaneous or subcutaneous metastases will be treated by gene transfer to the tumor. Two treatment strategies will be employed in 2 groups of 6 patients each. Group 1 patients will receive treatments 3 times a week on days 1, 3 and 5. Group 2 patients will receive 2 weeks of treatment 3 times a week, all to the same lesions. Patients with two lesions will have treatment to one site and the other site will be observed. Patients with three or more lesions will have one site treated, one site observed, and the third site will be removed for preparation of a disaggregated tumor cell suspension to be cryopreserved and used for subsequent DTH testing. The patients will be observed for local and systemic toxicity on each day of treatment, 1 week following treatment, and day 29 after the vaccination. If tumor regression is noted either at the treatment site or at distant sites, a biopsy will be performed and the tissue examined by immunohistochemistry. Restaging of the patients' disease and long term toxicity evaluation will be performed following each course and at 3, 6, and 12 months.